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1. INTRODUCTION

1.1 Introduction to the Restoration Plan

This document has been developed in response to Planning Condition 18 of the Decision Notice 1/2750-10 for the restoration of the inert Landfill Site at Vicar's Grove Pit, off Little Almshoe Lane, near St. Ippollitts, Hertfordshire. The proposal includes schemes for landscaping, soil/subsoil improvement and the re-introduction of vegetation, i.e. a full restoration of the site which was left incomplete by the previous owners. Provision of a small, but necessary, inert materials processing area at the front of the site will ensure financial viability. Final restoration will ensure that the site is compatible with the surrounding environment, and on completion will enhance the environmental aesthetics of the area, as well as the biodiversity.

The site comprises a working area immediately adjacent to the site entrance, a large area of closed landfill and an arc of semi-natural woodland. There is also a well-established hedgerow alongside Little Almshoe Lane.

1.2 Location

Vicar's Grove
Little Almshoe Lane
Nr. Hitchin
Hertfordshire

NGR: TL 192 258

1.3 Location Description

The Vicar's Grove site is located north of the Little Almshoe Lane, approximately 1km from the southern extremis of Hitchin, and 1km west of Little Almshoe village. The B656 is located 500m to the east of the site; Stevenage is approximately 2.7km to the east of the site. The site is located within an existing Green Belt, and surrounded by arable and pastoral farmland.

1.4 Restoration

Restoration refers to the planned and controlled development of a final landform, to a defined (or agreed) standard. Restoration should ensure a resultant improved landscape with beneficial after-use.

The Restoration Plan shall endeavour to control the development of the site and protect the environment.

This Restoration Plan must be used in conjunction with the Soils Management Plan (Reference Document: 541/PAPP/SMP1).

2. PRESENT SITUATION

2.1 Introduction

The previous Restoration Plan for Vicars Grove was not completed (Plate 1 and Plate 2) by the previous owner of the site. Therefore the Planning Application proposes to complete the restoration of the site, to agricultural quality pasturelands suitable for the grazing of horses.

2.2 The Inert Landfill Zone

With the exception of the established woodlands much of the closed landfill area is made up of scrubland or rough grassland that is not well established; the vegetation is not made up of protected or notable species and is not a habitat of conservation concern (Ecology Scoping Survey Report), nor is it suitable or accurate to be considered restored.

The relatively immature woodlands (Plate 3) surrounding (north-east, north and north-west) much of the closed landfill site are made up of willow, hawthorn, elder, cherry, white poplar, oak and field maple. These woodlands also contain a number of more mature trees such as oak and ash. This area of woodland does not constitute habitats of conservation concern. The older trees are of greater ecological value, as are the hedgerows; however, the restoration will secure the entirety of these habitats and protect them from the rigours of the restoration activities.

Plate 1 shows the main view of the infilled area of the site. Plate 2 shows close up details of some surface areas of the infilled area where vegetation is very sparse indeed.

It is unlikely that the scrublands and rough grasslands will succeed into a natural, healthy vegetation system for some time, if conditions remain unimproved.



Plate 1: View of the Inert Landfill Site at Vicar's Grove Inert Landfill Site



Plate 2: Ground Surface Details at Vicar's Grove Inert Landfill Site



Plate 3: Immature Woodland at Vicar's Grove

The landscape surrounding the site is rural, generally attractive, and made up of low undulating hills and small patches of woodland. The landuse is predominantly made up of arable farming.

Overhead transmission lines run across the site (north-east to south-west) which are a visual detractor.

The present distant (1.4km) view of the site from B656 is not attractive; there are swathes of bare earth and worked ground which is visually discordant, and though bunds are being created to screen the worst of these views, they are yet to provide a vegetated visual barrier.

3. RESTORATION PROPOSALS

3.1 Planned restoration

The restoration proposal aims to retain and protect the surrounding woodlands on site, and also the well-vegetated bunds, created during earlier excavations on site. It also aims to create a continuous protective 'buffer zone' between the woodlands and the surface workings of the restoration process.

This zone of root protection will constitute a variable zone of approximately 12m in width, and will ensure the safety of the established hedgerows and woodlands.

3.2 Phased Restoration

The restoration of the Vicars Grove Site will take place in distinct phases. Fig.1 over page summarises the four principal phases of restoration. Wherever possible and practical, the restoration scheme would mainly utilise materials already on site, reducing vehicle movements to and from the site. However some materials contained within the existing landfill may not be suitable for higher quality restoration and may need to be removed from the site. In addition, the existing landfill may not provide sufficient soil and soil-making materials required for restoration. Consequently some materials may need to be imported onto the site to allow for adequate restoration of the site.

The final landscape will be overlain by a final soil layer (subsoil/topsoil) principally by materials previously stripped and reclaimed from the site (Reference Document: Soil Management Plan). The method of soil stripping for each identified phase will be as follows:

1. work will commence from the far side of the area adjacent to the edge of the tree root protection zone for Phases 1, 2, 3, and 4.
2. topsoil will be stripped in 20m by 20m sections



Fig.1: Phases of Restoration

3.3 Landscape Effects

It is intended that the final restoration of the Vicars grove site will be of rural character fully in keeping with the surrounding landscape. The pastoral character will provide attractive views from nearby roads and footpaths. It is likely that the completed restoration will appear as an attuned constituent of the surrounding countryside, rather than a visually discordant component. The proposed restoration would not be widely visible

There are no expected adverse effects upon the neighbouring landscape during, or subsequent to, the restoration process. However, it is likely that there could be adverse visual effects during the restoration, such as storage mounds of soil and subsoil; it is considered that these effects will be negligible. Any adverse short-term effects shall be off-set by the long-term benefits of restoration, environment improvement, habitat protection and conservation.

Much thought has been given regarding allowing a public footpath to encircle the final restoration paddocks. However, because the fields will be used for the grazing of horses and ponies, of which some could be valuable or nervous animals, and because of the likelihood that young people could be utilising the equestrian facilities that public access should not be facilitated.

Please also refer to

- Soils Management Plan (Reference Document: 541/PAPP/SMP1)
- Woodland Management Plan (Reference Document: 541/PAPP/FWM1)
- Tree and Shrub Planting Scheme (Reference Document: 541/PAPP/TSP1)
- Bat and Bird Box location Schemes (Reference Document: 541/PAPP/BAT1/541/PAPP/BIRD1)
- Aftercare Scheme (Reference Document: 541/PAPP/AFT1)

3.4 Dust and Noise

It is anticipated that the impact of noise will be negligible, though adherence to working hours will be maintained. Careful use and maintenance of plant and on-site vehicles will ensure all equipment is in good working order, and vehicles operate with standard noise suppression.

It is likely that some dust may be created during the restoration of the site, particularly during removal of waste, sorting, crushing, movement and soil-laying. The nature of the enclosed site, surrounded on three sides by older bunds and trees, will ensure that minimal dust will move off site. Should wind/breezes transport dust in a southerly direction, or reach strengths likely to transport dust off site works, will halt to prevent movement of dust.

Also refer to Dust Management Plan (Reference Document: 541/PAPP/DMP1).

3.5 Aftercare

It is envisaged that the final landuse will be predominantly grasslands for the grazing of horses and ponies. The pasturelands will be maintained and kept in good order to ensure the safety and health of the horses, and also to create a suitable pastoral image that is in keeping with the surrounding landscape.

The encompassing woodlands will be monitored to ensure their development continues to provide a significant habitat for wildlife.

A landscape Buffer Zone will be maintained to add biodiversity to the site and maintain the Tree-root Protection Zone.

Full details of the aftercare plan are found in the Aftercare Scheme (Reference Document: 541/PAPP/AFT1).

3.6 Technically Competent Management

All activities concerning the surface removal of inert waste will be supervised by a technically competent person. This will be Mr. Paul Smith of Welwyn Services Ltd. or Mr Russell Carter of QSP Ltd.

4. METHODOLOGY

4.1 Preparation

Preparation includes the removal of surface vegetation and the removal of approximately 1-2m depth surface material, though in the centrally 'domed' area of the site will be lowered by a further 1-3m (to a maximum depth of 5m). The site will be divided into a 20m x 20m grid to ensure methodical working progression throughout each phase as highlighted by MAFF guidance (Good Practice for Handling Soils).

The area set aside for each Phase, for the storage of top-soils and sub-soils should be made ready in advance of soil stripping. The storage area should, wherever possible, reduce the incidence of compaction and secure the protection of the semi-natural woodlands surrounding the site (Reference Document: Soils Management Plan).

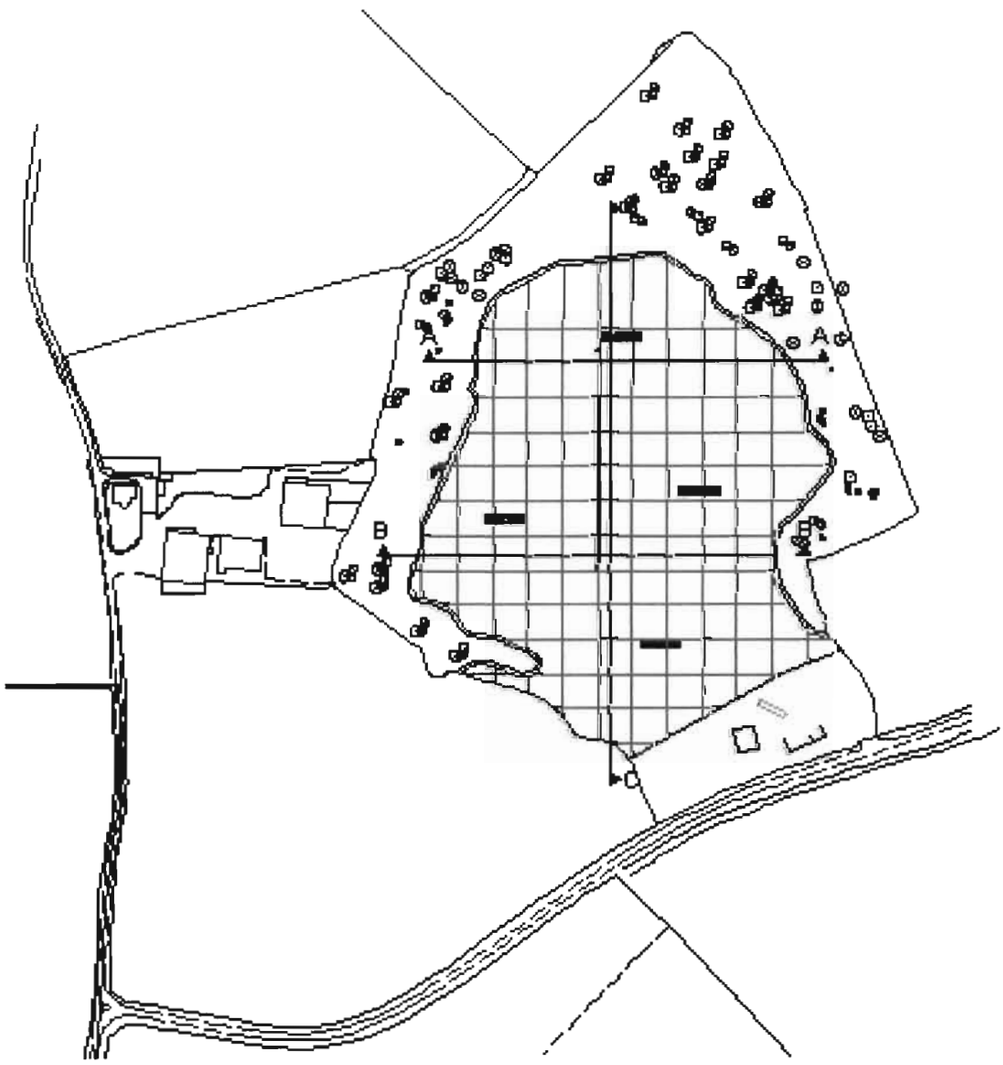

Fig.2: 20 x 20 Grid System to delineate phased restoration

4.2 Soil Stripping

The method for stripping both topsoil and sub-soil detailed in the Soil Management Plan.

4.3 Surface Preparation

The area being prepared for soil laying should be cleared of debris, and any other materials that may hinder the development of a healthy soil system.

A wing-tined ripper shall then be utilised to prepare the ground surface ready to bond with restoration sub-soils. Weather conditions shall be considered before utilising a wing-tined ripper.

Full details of surface preparation are provided in the Soils Management Plan (Reference Document: 541/PAPP/SMP1).

4.4 Soil Laying

Sub-soil shall be placed using a loose-tipping method working in a sequential strip system. It is essential that topsoil be placed onto subsoil without the excavator/tracked vehicle travelling over the newly deposited sub-soil (Reference: MAFF; Good Practice Guide for Handling Soils).

Level Boards should be employed to verify and ensure the correct thickness of soil layers.

Full details are provided in the Soil Management Plan.

4.5 Seeding and Vegetation

Preparation for, and seeding of the restored site will only take place after soil laying procedures have been carried out, and fully verified for quality for each Phase. It is intended to use a Horse and Pony Grass Pasture seed or Long Term Grazing Ley (which will contain a range of species that may allow for the natural establishment of wild flowers, as well as good health of horses). Also refer to Tree and Shrub Planting Scheme (Reference Document: 541/PAPP/TSP1) for further details.

4.6 Fencing

Fencing across the site will be of Post and Rail style, which will be used to separate the pastureland areas of the site from the Woodlands and the vegetated bunds which surround parts of the site.

5. SITE CONTROL DURING RESTORATION

5.1 Mud on Road

The site supervisor and individual drivers are responsible for monitoring the public highway (Little Almshoe Lane) and the access to the site to ensure that all public areas are kept free of mud and other debris. All vehicles will be inspected prior to leaving the site to ensure they are free of debris. Labour will be made available to remove debris from vehicles and a mechanical sweeper will be made available when required.

As part of the Planning Conditions, Welwyn Services Ltd. undertakes to introduce and operate a wheel wash during the restoration of the site. Hard surfacing leading up to and beyond the wheel wash and as part of the working area will be constructed to assist with the prevention of mud and debris being deposited on Little Almshoe Lane.

Welwyn Services Ltd. will monitor Little Almshoe Lane throughout the day, and during particularly inclement weather or spillages that a Road Sweeper/Cleaner will be hired to clean the highway quickly and efficiently.

5.2 Gates and Fencing

The site entrance will be kept free of mud and debris by daily sweeps, and a mechanical sweeper made available when required. The gates are of metal construction and to prevent unauthorised entry to the site, when the site is not supervised, it will be locked and secured.

Welwyn Services Ltd. undertake to repair any fencing on site.

5.3 Litter

Due to the waste composition on site, it is unlikely that the restoration of Vicars Grove will create a litter issue. However, the situation shall be monitored throughout the restoration period. If litter is discovered on site it will be immediately collected and temporarily stored before disposal. If litter escapes the site, it will be immediately collected and removed to storage prior to disposal.

On particularly windy days the main gates will be closed to prevent the egress of litter from the site.

5.4 Dust

A wheel wash is to be utilised throughout the restoration of the site. Hard surfacing will be introduced into the "working yard" to prevent mud and debris being deposited on the road.

It is considered that on certain days when the wind is excessive and likely to transport dust off-site, stripping, soil movement and restoration will not take place to reduce the creation and movement of dust.

It is considered that applications of water during dry, dusty periods could be considered to reduce incidence of dust. However, the quantities of water used to dampen the ground will be carefully monitored to ensure no additional production of leachate, groundwater or surface water flow.

The following Operations Guidelines should be adhered to throughout the Restoration Phase:

1) Dust monitoring shall take place periodically throughout the day
2) Operations shall only take place during permitted working hours
3) Restoration Operations shall adhere to the Restoration and Soils Management Plan (as agreed with Hertfordshire County Council)
4) Good Housekeeping of the site shall be maintained throughout the Restoration Phase
5) Movement, tipping and treatment of waste shall not be carried out during high wind episodes
6) Any vehicle leaving the site shall be checked to ensure they are clear of debris and loose material
7) Any vehicle leaving the site shall be checked to ensure that materials are secure
8) Wherever practical spoil heaps and restoration material should be located to the northern area of the site (as restoration permits), where woodlands will act as a windbreak
9) Introduction of windbreaks where necessary and/or practicable
10) Spoil heaps and restoration materials should not exceed 4m in height (from surface level)
11) Dust may be suppressed with the application of clean water spray from an on-site bowser:
    a. water applications must be agreed with the site supervisor or site manager prior to applications being carried out
    b. water shall be used sparingly
    c. water applications shall be monitored

Site personnel should also maintain open communications with nearby dust receptors – principally Vicars Grove Farm – and monitor Little Almshoe Lane for dust deposition.

For further information refer to Dust Management Scheme (Reference Document: 541/PAPP/DMS1).

5.5 Noise

It is unlikely that noise shall impact on any neighbours, or the local environment due to the location of the site which is sufficiently distant from surrounding villages and other settlements. Vicar's Grove Farm which is adjacent to the site will be screened by the historical bunds and the hedgerows and trees now grown up around the site boundary.

Restoration activities shall only take place during normal working hours.

All plant, equipment and vehicles will be maintained to ensure good working order, and to minimise noise impacts.

5.6 Vermin and Pests

It is considered that vermin and pests are unlikely to pose a problem on site as there are no activities involving biodegradable waste on which they would feed. There have been no reported sightings of rats on site.

Monitoring for the presence of pests and vermin will take place, and appropriate action taken should they be discovered.

5.7 Odour

The activities are unlikely to generate significant or nuisance odours. However, odour monitoring will be carried out during operations.

If any odours are discovered to have a source on site, those odours will be investigated and remedied.

5.8 Site Security

Two Closed Circuit Television Cameras will monitor the site throughout the day and when the site is closed.

The entrance gates to the site are always closed and locked when personnel are not on site.

5.9 Gas Monitoring Points

There are four gas-monitoring points on site which be protected throughout the restoration process. The gas-monitoring points will be clearly marked, and fencing posts and wire mesh fencing will be placed around the monitoring points. The alignment of the new paddock boundaries will incorporate the existing monitoring boreholes to ensure the wellheads are not placed in inconvenient locations.

5.10 Contrary Waste

If any Contrary Wastes are identified on site during excavation, digging will be immediately halted. The waste will be collected and temporarily stored in a container/skip in the working area prior to legal disposal.

A record shall be maintained of any Contrary Wastes excavated on site.

5.11 Root Protection Zone

A landscape Buffer Zone has been designated adjacent to the Vicars Grove woodlands. Initially, the Buffer Zone's key role is to maintain a root protection zone for the mature woodland trees behind the original bund.

The mature woodlands will be protected throughout the restoration, with Root Protection being measured from the boundary of the semi-natural woodlands. Wherever practical a 12m Root Protection Area will be maintained throughout the site, extending from the original semi-ancient woodlands from the woodland side of the bund. However, where surface landfill material is entwined and enmeshed with self-seeded saplings and trees (over the original bunds), careful removal of the material will be necessary, thus the root protection may be compromised for the younger, self-seeded trees.

The key to a successful restoration is the thorough removal of the surface inert waste to a point where sub-soil and topsoil may be laid, thus facilitating a healthy medium for subsequent planting.

Surface debris must be removed to ensure correct sub-soil and topsoil laying, and subsequent Buffer Zone planting and seeding.

Where possible and appropriate some younger saplings will be transplanted to areas of the landscape Buffer Zone.

A secondary role for the Buffer Zone will be to provide an area of habitat biodiversity once restoration has been completed.

5.12 Timing

The Restoration Plan aims to be completed by September 2016. If works begin in Spring 2012 this will effectively allow for one Summer's working on each phase of ground restoration, including woodland management.

This is a very tight schedule of works and operations reliant on good weather and well-planned operations.

6. Conclusions and Recommendations

6.1 Introduction

The Restoration Plan has been developed to ensure a planned and detailed restoration of the former inert landfill area of the Vicars Grove site, and should be used in tandem with the Woodland Management Plan and the Tree and Shrub Planting Schemes.

6.2 Recommendations

The original restoration of the Vicars Grove Site was to take place over a 10 year period. From the outset the timings of the Restoration Plan will be very tight. The four phases of restoration spread over four 'seasons' may be affected by vagaries of weather and operations (mechanical reliability).

QSP Ltd. recommends open and regular communications with Hertfordshire County Council throughout the restoration of the site.

6.3 Conclusion

The Restoration Plan shall control the development on site and protect the environment.

The Restoration Plan allows scope for constant monitoring of progress and intervention where necessary.